FORTY-SIXTH

Annual Report

OF THE

BOARD OF MANAGERS

OF THE

MONONGAHELA NAVIGATION CO.

TO THE

Stockholders with Accompanying Documents.

PRESENTED JANUARY 14, 1886.

W. V. DERMITT & CO. PRINT. 407 GRANT STREET, PITTSBURGH.

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PRESIDENT

M. K. MOORHEAD.

SECRETARY AND TREASURER

WM. BAKEWELL.

MANAGERS

JOSEPH ALBREE,
ALEXANDER BRADLEY,
FELIX R. BRUNOT,
A. C. BAKEWELL,
JOHN HARPER,
GEORGE B. LOGAN,
J. B. MURDOCH, M. D.
J. B. MOORHEAD.
A. E. W. PAINTER,
J. B. SWEITZER.

ANNUAL REPORT.

To the Stockholders of the Monongahela Navigation Company:

In making their customary annual report, your Board of Managers have nothing of any special interest to record. By the construction of Lock and Dam No. 7, shortly before the close of last year, this company did all that was in their power to extend the slack-water navigation of the Monongahela River to the state line between Pennsylvania and West Virginia, the United States Government having undertaken the construction of the improvement above Geneva. Unfortunately for all concerned, the Government commenced at the upper end of the improvement by building Lock No. 9 at Hoard's Rock in the latter state; so that until the gap is filled by the construction of Lock No. 8, not only is the improvement incomplete, but our Lock No. 7 is of but little benefit to the public, and is rather a source of expense than of revenue to the stockholders of this company. We have the satisfaction, however, of knowing that the obligations of the company as to the extension of the improvement have been fully met, and that any inconvenience arising from the incompleteness of the slack-water navigation of the Monongahela River is not due to any want of enterprise, or neglect of duty, on the part of your Board of Managers.

Hitherto no revenue has been received from Lock No. 7; a rate of toll for the use of that Lock has been adopted, which went into effect on the first day of this year, but it is very doubtful whether the tolls will suffice to pay the expenses of tending the Lock and keeping it and the Dam in good repair.

Having completed the construction of a second Lock at Dam No. 3, your Board of Managers, in order to accommodate the rapidly increasing output of coal from the Fourth Pool decided to duplicate the Lock at Dam No. 4, and, as stated in our last report, made a contract with Messrs Drake and Stratton for the construction of that work. These contractors immediately commenced to make the necessary preparations and have carried on the work with commendable energy, so that when they stopped the work for the winter, the walls were raised to a sufficient height to secure the work from injury by ice or high water. A detailed statement of this work will be found in the accompanying report of our engineer Thomas P. Roberts, Esq.

No serious injury was done to the works of the company by the ice during last winter, or by high water during the year. The highest water occurred about the middle of January, 1885, when the river rose to a height of thirty feet, (being six feet over the walls of Lock No. 7) and submerged all of the Locks on the river. With this exception, there was very little high water on the Monongahela, and the past year was remarkable for the absence of the usual freshets during the spring and summer months. The lowest water during the year was in October, when there was only four feet and two inches in the channel at Lock No. 7.

The navigation of the river was suspended by ice from the 22d of January last year until the beginning of March, the period of suspension varying at the different Locks from twenty to forty-four days. The damage done by the ice was inconsiderable. The ice gorge in the Youghiogheny River which had accumulated, owing to the insufficiency of water in that stream to carry it off, broke on the first of April, and came down over Dam No. 2 with such force as to carry off about seventy-five feet of the upper sheeting and some of the lower sheeting and comb timbers.

In the month of August, the navigation was seriously obstructed opposite the mouth of Turtle Creek by the formation of a bar in the channel of the river, from the deposit of large quantities of gravel and slack coal washed out of the creek. This, however, was speedily removed within the short space of three days by dredging.

A leak occurred between the walls dividing the old and new Lock at Dam No. 3, which raised the floor of the new Lock and threatened to be serious. It was successfully repaired by taking up part of the floor of the Lock and driving piles, to which the floor was spiked. This, together with other repairs at that Lock, involved considerable expense.

The other Locks and Dams have been carefully overhauled and repaired, so that the entire works of the company are now believed to be in excellent repair.

For a further statement of this branch of the work, we refer to the report of our faithful and efficient Superintendent of repairs, which is appended hereto.

The amount of tolls received during the past year is somewhat larger than it was during the year preceding, although it still falls considerably short of the revenue received during the year 1883.

Tolls in 1883, ...	$279,023.56
Tolls in 1884, ...	207,202.97
Tolls in 1885, ...	215,675.31

This falling off in tolls is due partly, no doubt, to the increasing use of natural gas, as a fuel; but chiefly, we think, to the unfortunate suspension of work by the coal miners during several months of the past year. The strike at the Monongahela River Mines commenced early in March, 1885, and continued with partial breaks until the early part of the present month. This cause of decrease of the tolls from coal, however serious, is not likely to be in any way permanent, and the other cause, to which we have referred, although at first sight apparently influential, will not, we believe, materially affect the revenues of this company, for the reason that it is almost entirely local, and that the coal furnished to the manufactories in this city and its vicinity has been chiefly carried by railroads, so that the use of the gaseous fuel will not interfere with the demand for coal destined for the lower river markets, from which our principal revenue is derived.

With a brief reference to the financial condition of the company, we will close our report.

In pursuance of the action of the stockholders of this company at a special meeting held on the 28th March, 1882, as stated in our annual report of January, 1883, the Board of Managers were authorized to increase the indebtedness of this company by the issue of bonds to the amount of $500,000. The object of this issue of bonds was the construction of Lock and Dam No. 7, the duplication of the Locks Nos. 3 and 4, and the construction of a Chute in Dam No. 1; and other new construction necessary to increase the capacity and efficiency of the improvement.

The amount already expended in these constructions is as follows:

New Lock No. 3, completed, . . .	$220,071.43
Lock and Dam No. 7, completed, .	161,733.13
Chute in Dam No. 1, ...	26,115.74
New Lock No. 4, in process of construction,	125,773.45
Other new construction, ...	55,866.32
Engineering expenses on the above work,	13,373.44
	$602,933.51

It will thus be seen that the amount already expended is in excess of the amount of bonds authorized, by a little over $100,000. The amount which will be required to complete the new Lock No. 4 will probably amount to about $58,000.00

Under the provisions of the Act of Assembly of 25th January, 1854, referred to more particularly in our report of January, 1883, the company is authorized practically to convert the bonded debt into capital stock by applying the net earnings of the company, to the payment of the principal and interest of the bonds so issued, and by the *pro rata* distribution of capital stock of the company to the stockholders to an amount equal to the money so applied.

It is on this basis, and on the authority of this statute, that the company re-commenced in July, 1884, and have since continued, to declare dividends in stock in lieu of the ordinary cash dividends. This, it will be readily seen, is merely increasing the capital stock to the amount expended in actual construction; and returning to the stockholders in that shape, and to a like amount, the net revenues expended in construction, and which they would otherwise receive as cash dividends.

So far, we believe, the plan adopted for increasing the capital stock, so as to have some just proportion of the cost of the improvement, has proved entirely satisfactory to the stockholders.

It will be seen by reference to the treasurer's report that the amount of construction account, including the sum expended on new construction to 1st inst., is $1,723,033.71, while the amount of capital stock, scrip, and outstanding obligations of the company for construction account, is:

Capital stock, ...	$1,194,650
Scrip convertible into stock, . . .	2,514
Outstanding second mortgage bonds, . .	347,000
First mortgage bonds, ...	37,000
Bills payable, ...	55,000
	$1,636,164

The amount of first mortgage bonds outstanding is only $37,000. These bonds fall due on the 1st of July, 1887, and for their payment provision is made by a sinking fund of the same amount which is invested for the purpose of meeting these obligations. And the company are therefore prepared to pay those bonds at any time at or before maturity.

Your Board of Managers have this day declared a dividend of six per cent. on the present capital stock of the company, by ordering a distribution of capital stock *pro rata* among the stockholders. Amounts less than fifty dollars (the par value of one share) are paid in scrip which does not bear interest, but which is convertible into stock when surrendered to the treasurer in sums of fifty dollars. If the amount so surrendered exceeds fifty dollars, or a multiple of that sum, the difference is returned in scrip.

The various employees of the company have continued to discharge their respective duties with fidelity and diligence.

The reports of the Engineer, Treasurer, Cargo Inspector, and Superintendent of repairs will furnish further details of the condition and business of the company and of the improvements under our charge.

Respectfully submitted by order of the Board of Managers.

M. K. MOORHEAD,
President.

PITTSBURGH, Jan. 14, 1886.

REPORT OF ENGINEER.

Pittsburgh, Jan. 6, 1886.

M. K. Moorhead, Esq.,
President Mon. Nav. Co.

Sir:—I herewith respectfully report as follows on the work under my charge.

After my appointment in November, 1884, as Engineer of your company, I was directed by yourself to prepare plans and estimate for the construction of a new or second Lock at Dam No. 4, thirty-eight miles above Pittsburgh.

During the next few weeks a careful hydrographic survey of the locality was prepared, and before the end of the year detailed plans for the new Lock were prepared and passed upon by the company. Bids for doing the work were received until noon of January 7, 1885, and on the following day, January 8th, the contract was awarded to Drake and Stratton, four parties in all bidding.

The new Lock as designed, and at this date nearly completed, is of the following general dimensions; entire length of Lock walls 331 feet, height above floor of chamber twenty-six feet, thickness of masonry at base, entire length of walls, fifteen feet, and carried up vertically with this thickness at upper and lower recesses. Between the gates for a distance of 206 feet, the walls diminish from the base, by steps on the rear side to a thickness of six feet two inches at the coping, in the usual manner of Lock construction.

In this length of 206 feet the walls are battered uniformly on the face from the bottom to the top of the second course, three-sixteenths inches per foot, making six inches in all at the top. On the coping course this batter is slightly increased. It is thought by thus battering the walls in the chamber there will not be the same liability of boats, when rising rapidly, scoring and tearing the masonry. Coal boats of over 700 tons capacity frequently pass through your Locks, often independently, of the attendent steamers. A very little movement of such a mass generates a great momentum, and a shock when it is suddenly arrested by the sharp ironed corners of the boat concentrates it at one point, making it highly destructive, not only to the appearance but even to the integrity of the heaviest masonry heretofore employed on your works.

In the new walls the twenty-six feet of height is divided into fourteen courses, the lower five and the coping course being two feet thick each, and none less than twenty inches. The masonry courses are carried in range, everywhere, entirely through the walls, with three-eighth inches thickness on the face, for horizontal, and one-fourth inch thickness for vertical joints. All the face work is laid in imported Portland cement. The spaces between stones in the backing was filled with concrete of Rosendale cement, rammed in; this in my opinion securing a greater actual and more uniform strength of bond than could be assured by either mortar or grout as usually applied.

About the quoins more attention was paid to the backing, the stones being brought closer together, and adjacent ones clamped with one-inch round iron clamps on every course for twelve feet, radiating from the hollow quoins. With these precautions, it is believed that no jars produced by the slamming or the leverages of the gates, from either collision of boats, swift current or ice, will loosen the masonry. No work, unless it be break-water masonry, is subject to greater wear and tear than steamboat Locks, and the Monongahela Slack-water system is peculiarly the one in the United States subject to the heaviest and roughest usage in the country, requiring the greatest constant care to keep it in successful operation.

The plans were dictated from experience derived from the history of your own work, not elsewhere to be had, and decided upon with your own and the advice of others connected with the company.

I am gratified to report that the contractors have carried on the work of the masonry faithfully, and promise to present you a Lock superior to any heretofore built on the river.

The width of the Lock at the bottom is fifty-six feet, the batter before described increasing it to fifty-seven feet at the top, between the walls. At the ends and about the recess the walls are vertical, and fifty-six feet apart. The length of chamber available for passing boats is 226½ feet, as compared with 220 feet for the second Lock at Dam No. 1, and 275 feet for the second Lock at Dam No. 3.

The new Lock being placed on the shore side of the old one, it became necessary to excavate a large quantity of material to make room for it. In order to decrease the liability of accident during the progress of the work, and particularly to preclude the possibility of "a cut around" by the river, it was decided to excavate the lower half of the space and build up that end of the Lock first. The work of excavation began March 18th, first with wheelbarrows removing the old stone paving and surface material, and a week or two later one of the Monongahela Dredging Co.'s boats was at work. The total quantity of earth to be removed was 30,000 cubic yards. The average width of the cut at the bottom being about ninety feet, with an average depth of twenty-eight feet, between the land wall of the old Lock and the shore side. By May 28th 15,000 cubic yards of material had been removed, and work upon the coffer-dam to enclose the lower half of the work was commenced. Pumping, with the company's steam-pump boat Deluge, and auxiliary pumps, was begun June 24th, but it was not until July 10th, after a series of minor accidents to the coffer-dam, that the pit was thoroughly pumped out, and leveling of the bottom was commenced. Mr. Doig, the contractors' efficient superintendent, laid railroad tracks into the pit in order to assist in the removal of the mud. The first timbers were placed in the bottom about July 13th.

It having been found impossible to drive the two rows of piles intended for the anchorage of the floor down the middle of the

Lock, more than five feet in the compact gravel and sand on which the work rests, another plan was resorted to, viz: the construction of a box, the length of the Lock chamber, with a three-inch plank bottom eighteen feet wide and eighteen inches deep, filled with concrete. This box was so framed and bolted to the floor timbers and piles, which were left in after being sawed off at the floor level, and it can be relied upon to exert its weight to resist any tendency of the floor to rise from upward pressure. Louisville cement was used in this and other parts of the work below water.

The first stone was laid at 1:30 P. M., July 23d, about the middle of the land wall. After this the work proceeded in a regular manner, and by September 6th both walls were so far advanced that the coffer-dam was removed. The lower out side corner of the Lock was excavated to a depth of ten feet below the bottom course of masonry, and about 100 cubic yards of concrete in one mass deposited there.

The arrangement of the foundation under the recess and ends of walls consists of three courses of timbers one foot square, laid close. This timber was chiefly sawed hemlock, in lengths of from twenty-five to forty-four feet, crossed and interlocked, and spiked together horizontally and vertically with ⅞″ square spikes 18″ long, one bolt every six feet. Under the long walls only one course of timber laid close, and horizontally bolted was deemed necessary.

The first gate for the lower end was finished and placed in position November 16th. The wickets for these gates are made, after an original design, of plate steel and wrought iron rivetted together. After the construction of a substantial coffer-dam around the upper end of the work, the dredge boat moved up through the new Lock September 17th, and by October 3d had completed the excavation of the upper end. A coffer-dam was then built across below and the upper pit pumped out.

Owing to a slip of 600 cubic yards coming in, after the dredge left, the laying of the foundation timber was retarded so that it was not until November 11th that the laying of masonry at this end of the Lock was begun.

A flooring of two-inch pine plank extends under the walls and over the entire chamber, covered between the walls with a second course of three-inch pine plank thoroughly spiked to the foundation timbers.

Not as much trouble as was anticipated occurred from leakage from the old Lock; but as a precaution, Maj. McGowan, the Superintendent of repairs, grouted the land wall, using several hundred barrels of cement for this purpose. At the present date the walls at the upper end are up to the sixth course on both sides, the head wall completed and clamped, the gate floor and mitre sills constructed, and the work is in condition to withstand the action of the floods and ice.

Turbine wheels having been determined upon to operate the maneuvering machinery, the water supply for them has been provided for by rivetted boiler plate iron pipes, forty-four inches in diameter, the entire length of the Lock walls, one on each side. These pipes are laid in concrete.

During the progress of the work, Maj. McGowan, Superintendent of repairs, constructed the guiding cribs for the new Lock in a very substantial manner. To provide foundation for them 7,700 cubic yards of material was removed along the shore above, and 7,900 cubic yards below the Lock. The length of these cribs, as now partially constructed, is 200 feet for the upper and 300 feet for the lower one.

Work upon the upper gates is well advanced, and they will be finished before the walls will be ready to receive them.

Up to the present time there have been laid and used in construction, (approximately):

Masonry,	6,297.5	cubic	yards.
Concrete, in anchorage box,	260.	"	"
" under floor,	413.	"	"
" between walls, old & new lock	175.	"	"

This is exclusive of several hundred yards of concrete enveloping the turbine supply pipes put in place by the company's men.

Of timber there has been used:

Special oak for mitre sills, etc.,	10,396	feet,	B. M.
Oak, foundation,	60,590	"	"
Hemlock, foundation,	624,350	"	"
Pine plank, flooring,	125,630	"	"
Sheet, piling,	4,424	"	"
204 lineal feet, oak piles.			
Total, timber,	835,390	"	"
Earth excavation, to date,	29,959	cubic	yards.

During the progress of the work I have been faithfully assisted by Mr. Richard A. Roberts, resident engineer, in charge; and for several months by Mr. Theodore J. Allen, Inspector.

Respectfully submitted,

THOMAS P. ROBERTS,

Engineer Mon. Nav. Co.

REPORT OF SUPERINTENDENT OF REPAIRS.

M. K. Moorhead,
President Mon. Nav. Co.

Dear Sir:—I respectfully submit the following as my report for the year just closed, which has been free from any unusual damage to the works of the company. In addition to the ordinary work of repairs the force under my charge for that purpose has been employed a good deal of the time during the year in aiding in the construction of new work, principally at Lock No. 4.

LOCK No. 1.

The retaining crib extending from lower end of land wall down the shore a distance of 200 feet, owing to its decayed and delapidated condition, had to be taken down to low water mark and rebuilt. The lower end of guard crib, outside of river wall, also repaired. New machinery placed on middle walls of the Lock for working the gates. Boilers transferred from middle to shore wall, a high bridge or truss erected over Lock, on which there is placed a pipe to conduct steam to engines that works the machinery on middle walls. New suspension bars placed on lower gate river wall, large Lock. A considerable amount of blacksmith and carpenter work has been done here during the past season.

LOCK No. 2.

The old crib below the middle walls was taken down and rebuilt. The lower slope of this Dam overhauled, all empty cribs refilled with stone, about 200 pieces new sheeting used to replace what was worn out. The comb and upper slope of the Dam that was damaged at the time the heavy ice came out of the Youghiogheny last winter was repaired.

LOCK No. 3.

The abutment at the west end of the Dam, being decayed, was taken down and a new one built. Owing to a leak breaking through under the walls between the old and new Locks which raised the floor in the new Lock, a heavy expense was incurred in coffer-dams above and below, pumping out of Lock, stopping leak under walls, placing down floor and driving piles to which the floor was fastened to hold it in place. Soon after the completion of this work, which it is believed was done permanently, and after coffers were removed, and the Lock in working order, a further delay and further expense was occasioned by a casting under one of the iron gates breaking, necessitating a second coffer-daming and pumping out of the Lock. The castings or steps under the upper gates of the new Lock that were not working satisfactory was replaced with others of a different pattern.

LOCK No. 4.

To guard as much as possible against a repetition of the trouble experienced in the construction of the new Lock at No. 3, a quantity of cement grout was used under the wall and under the floor along the front of land wall of old Lock, to cut off any leak that might develop when excavating for the new Lock. A new step was placed under the lower land wall gate. One new set of friction gearing was placed on the upper end of river wall for working upper gate. Crib at lower end of river wall was repaired.

LOCK No. 5.

One new gate was constructed and placed in upper end of river wall. Dwelling house repaired and painted.

LOCK No. 6.

Two new gates built and placed in upper end of Lock.

LOCK No. 7.

A coffer-dam was placed across the upper end of Lock, and two new steps placed under upper gates. A large quantity of brush and stone rip-rap was used in protecting abutment at east end of Dam, made necessary by the action of the water scouring the bank below the Dam.

More or less gravel was put on all the Dams during the summer. The usual amount of blacksmith work, fixing of machinery, planking of gates. Carpenter work of the usual nature was done all along the improvement during the season. Lumber for new Lock gates, Sheeting for lower slope of the Dams, Crib timber, etc., have been procured, and on hand, to be used in case of an emergency. The improvement is now believed to be in unusual good condition to withstand the winter and spring floods.

Respectfully submitted,

THOMAS McGOWAN,

Superintendent of Repairs.

REPORT OF CARGO INSPECTOR.

STATEMENT OF THE BUSINESS

ON THE

Monongahela Slack-water during the year ending December 31, 1885.

RECEIPTS FROM	TOTAL.
Coal and Slack,	$140,268.59
Coke,	4,096.84
Freight, Empty Crafts, Steamboats, Timber, &c.,	67,642.18
Passengers,	3,667.70
Total,	$215,675.31

Receipts at the Several Locks.

Lock No. 1,	$ 52,535.24
" " 2,	72,314.26
" " 3,	33,830.92
" " 4,	51,808.61
" " 5,	1,429.37
" " 6,	3,756.91
Total,	$215,675.31

Trade of Pool No. 1.

Tow Boats,	3,604
Crafts,	7,665
Total,	11,269
Number of Clearances issued Eastward,	2,693
" " " Westward,	5,297
Total number of Clearances issued in 1885,	7,990

Comparative Statement of Toll Receipts for the Years 1884 and 1885.

	Coal.	Coke.	Freight, &c.	Passengers.	Total.
Tolls for 1884,	$137,514.47	$2,995.31	$62,758.94	$3,934.25	$207,202.97
Tolls for 1885,	140,268.59	4,096.84	67,642.18	3,667.70	215,675.31
Increase for 1885,	$2,754.12	$1,101.53	$4,883.24		$8,472.34
Decrease for 1885,				$266.55	

STATEMENT

OF

Freight Shipped East and West on the Monongahela Slack-water during the Year ending December 31, 1885.

EASTWARD.		WESTWARD.	
Whiskey, bbls., . .	47	Sand, bushels, . . .	941,300
Lumber, feet, . .	6,150,567	Whiskey, bbls., . .	5,246
Timber, feet, . . .	1,616,500	Stone, perches, . . .	2,302
Pig Iron, tons, .	11½	Posts, number, . .	12,826
Pit Posts, number, . .	201,040	Sheep, number, . . .	4,384
Sheep, number, . .	80	Oil, bbls., . . .	1,073
Horses and Cattle, number,	331	Lumber, feet, . . .	263,645
Iron Ore, tons, . .	16,486	Timber, feet, . . .	435,600
Stone, perches, . .	2,048	Steel Rails, tons, . .	22,428
Railroad Ties, number, .	1,800	Hogs, number, . .	1,734
Fire Clay, tons, . .	3,463	Horses and Cattle, number,	667
Brick, number, . .	588,892	Staves, number, . .	4,000
Pipe, tons, . . .	595	Classified Freight, lbs., .	4,707,900
Classified Freight, lbs., .	22,657,366	Wood, cords, . . .	120
Hogs, number, . .	111		

PASSENGER RETURNS

OF THE

Several Boats Navigating the Monongahela River in 1885.

Boats.	Passengers.		No. of Locks.	David-son's.	Geneva.	Total.
	Through.	Way.				
Germania, . .	2,862	4,472	9,284	1,471	2,215	$1,331.65
James G. Blaine, .	2,881	4,883	9,793	1,489	2,163	1,356.60
Adam Jacobs, . .	1,097	1,226	2,469	607	718	445.00
Elizabeth, . .		5,157	7,549			377.45
W. R. Jones, . .		1,300	1,852			92.60
R. B. Kendall, .		820	1,288			64.40
Total, . .	6,840	17,858	32,235	3,567	5,096	$3,667.70

Passenger Business for 1884 and 1885 Compared.

	1884.	1885.	Difference.
Through Davidson & Geneva Passengers,	15,903	15,503	400 decrease.
Way Passengers, ...	20,019	17,858	2,161 decrease.
Total, ...	35,922	33,361	2,561 decrease.
Tolls on Through Passengers, . . .	$2,094.45	$2,055.95	$ 38.50 decrease.
Tolls on Way Passengers, ...	1,839.80	1,611.75	228.05 decrease.
Total, ...	$3,934.25	$3,667.70	$266.55 decrease.

Comparative Receipts in 1884 and 1885.

MONTHS.	1884.	1885.
January, ...	5,366.24	19,103.38
February, ...	15,806.04	3,291.17
March, ...	34,103.65	13,485.53
April, ...	43,395.32	41,245.98
May, ...	21,246.99	37,047.83
June, ...	13,877.46	24,202.96
July, ...	13,531.81	12,029.72
August, ...	6,231.66	19,232.20
September, ...	4,791.04	8,762.37
October, ...	4,997.44	10,663.96
November, ...	18,896.37	13,409.57
December, ...	24,958.95	13,200.14
Total.	$207,202.97	$215,675.31

STATEMENT

In Bushels of Coal and Slack Shipped from the several Pools of the Monongahela Slack-water during 1885.

MONTHS.	Pool No. 1.	Pool No. 2.	Pool No. 3.	Pool No. 4.	Pool No. 5.	Total.
January, .	1,477,500	3,893,500	1,514,500	1,348,300		8,233,800
February, .	199,250	1,556,500				1,755,750
March, .	414,500	2,450,500	958,200	1,313,900		5,137,100
April, .	3,048,300	7,577,500	3,337,600	3,573,700		17,537,100
May, . .	2,065,500	7,457,000	2,794,000	3,383,500		15,700,000
June, .	1,928,700	4,927,200	2,365,000	1,097,300		10,318,200
July, . .	259,200	1,075,500	1,309,000	1,005,200		3,648,900
August, .	781,000	2,197,000	1,631,500	2,560,600		7,170,100
September, .	685,000	557,000	417,500	701,700		2,361,200
October, .	227,000	530,500	345,500	1,567,100	8,500	2,678,600
November, .	265,000	1,026,000	288,500	2,407,400		3,986,900
December,	111,500	971,000	716,000	2,126,400	6,500	3,931,400
Total, .	11,462,450	34,219,200	15,677,300	21,085,100	15,000	82,459,050

Coke Business for 1885.

Bushels from Pool No. 1, ...	966,057	$ 724.54
" " " " 2, ...	2,498,000	3,372.30
Total number bushels Coke, ...	3,464,057	$4,096.84
Bushels Coal, ...	82,459,050	$140,268.59
" Coke, ...	3,464,057	4,096.84
Total, ...	85,923,107	$144,365.43

Comparison of the Coal and Coke Business for 1884 and 1885.

	1884.	1885.	
Total number of bushels,	81,706,852	85,923,107	4,216,255 increase.
Total tolls on Coal and Coke,	$140,509.78	$144,365.43	$3,855.65 increase.

I certify the foregoing to be correct.

W. P. Wood,
Cargo Inspector.

January 14, 1886.

Office Monongahela Navigation Company.

Report of the Treasurer of the Monongahela Navigation Company.

BALANCE SHEET, JANUARY 12, 1886.

Dr.		Cr.	
Construction, old,	$1,120,100.20	Capital Stock,	$1,194,650.00
Construction, new,	602,933.51	Scrip, convertible into Stock,	2,514.00
Cash in Bank,	12,138.76	First Mortgage Bonds,	37,000.00
Toll Bills, uncollected Tolls,	11,624.01	Second Mortgage Bonds,	347,000.00
W. P. Wood, Cargo Inspector,	3,244.85	Sinking Fund for payment of First Mortgage Bonds,	37,000.00
Repair Boat,	16,272.83	Contingent Fund,	50,000.00
Securities held for the Contingent and Sinking Funds, cost,	89,455.00	Bills Payable,	55,000.00
Profit and Loss,	20,599.67	Suspended Account,	6,477.76
		State Treasurer,	7,264.07
		Dividends Unpaid,	300.00
		Coupons Unpaid,	9,615.00
		Undistributed Stock Account,	129,548.00
	$1,876,368.83		$1,876,368.83

I certify the foregoing statement to be correct.

W. Bakewell,
Treasurer.

January 14, 1886.

Office Monongahela Navigation Company.

Report of the Treasurer of the Monongahela Navigation Company.

PROFIT AND LOSS ACCOUNT.

Dr.			Cr.
Expenses,	$42,763.11	Balance, January, 1885,	$ 40,009.47
Repairs,	47,248.50	Tolls,	215,675.31
State Tax on Capital Stock,	6,571.65	Interest Received,	1,207.35
State Tax on Gross Receipts,	1,801.89	Cash,	0.39
Interest on Bonds,	16,770.00	Coupons,	45.00
Discounts,	1,151.67	Received from Sinking Fund for Bond paid,	1,000.00
Premium on Bond purchased,	150.00	Balance,	20,599.67
Toll Bills lost,	6,835.37		
Dividend, (stock) January, '85,	63,825.00		
Dividend, (stock) July, '85,	67,608.00		
Amount paid on Bonds in excess of Dividends,	23,812.00		
	$278,537.19		$278,537.19

I certify the foregoing statement to be correct.

W. Bakewell,
Treasurer.

January 14, 1886.

Office Monongahela Navigation Company.

Report of the Treasurer of the Monongahela Navigation Company.

ABSTRACT OF CASH ACCOUNT.

Dr.			Cr.
Cash Balance, January 8, '85,	$ 4,252.62	New Construction,	$149,105.75
Tolls Received in Cash,	67,618.20	Dividends paid,	393.00
Toll Bills collected,	157,617.83	State Taxes paid,	7,655.62
Profit and Loss,	0.39	Coupons paid,	15,670.00
Received on Bonds,	5,000.00	Expenses,	42,763.11
Interest on Investments, etc.,	1,207.35	Repairs,	45,864.29
W. P. Wood, Cargo Inspector,	3,925.51	Repair Boat,	9,879.70
Bills Payable, proceeds,	53,848.33	Bills Payable,	10,000.00
		Balance deposited in Bank,	12,138.76
	$293,470.23		$293,470.23

I certify the foregoing statement to be correct.

W. Bakewell,
Treasurer.

January 14, 1886.

OFFICE MONONGAHELA NAVIGATION COMPANY.

Report of the Treasurer of the Monongahela Navigation Company.

STATEMENT OF BONDS AND NEW CONSTRUCTION.

Dr.			Cr.
First Mortgage Bonds, ...	$ 19,000.00	Paid on New Lock No. 3, ...	$220,071.43
Second Mortgage Bonds, ...	458,000.00	" " " " " 4, ...	125,773.45
Premium on sale of Bonds, ...	5,020.00	" " " " and Dam No. 7, . .	161,733.13
Cash paid in excess of amount realized on Bonds,	120,913.51	" " Chute No. 1, ...	26,115.74
		" other New Construction, . . .	55,866.32
		" Engineering, ...	13,373.44
	$602,933.51		$602,933.51

I certify the foregoing statement to be correct.

W. BAKEWELL,
Treasurer.

PITTSBURGH, January 14, 1886.

ANNUAL MEETING OF STOCKHOLDERS.

PITTSBURGH, January 14, 1886.

Pursuant to public notice the annual meeting of the stockholders of the Monongahela Navigation Company was held this day at 2 o'clock P. M., at the office of the company, No. 20 Grant street, in the city of Pittsburgh.

On motion of Mr. Brunot, Mr. R. H. Marshall was called to the chair, and Thomas W. Bakewell was chosen as Secretary of the meeting.

On motion of W. Bakewell, Messrs H. B. Goe and D. B. Sutton were chosen as Judges and Tellers of the election for officers and managers of the company.

The Secretary of the company laid before the meeting the Reports of the Board of Managers, Treasurer, Engineer, Cargo Inspector, and Superintendent of Repairs.

On motion,

Resolved, That the several reports of the Board of Managers, Treasurer, Engineer, Cargo Inspector, and Superintendent of Repairs, be accepted; that the reading of these reports be dispensed with, and that the Board of Managers be instructed to cause them to be printed in pamphlet form, for distribution to the stockholders of the company.

On motion,

Resolved, That the stockholders proceed to the election of officers and Board of Managers of the company for the ensuing year.

The election was held by ballot; and when the voting had ceased, it was, on motion of Gen. Sweitzer, resolved that the polls close, and that the ballots be counted by the Tellers.

The Tellers made their report, that by the unanimous vote of the stockholders the following persons were duly elected, viz:

For President, M. K. Moorhead; for Secretary and Treasurer, William Bakewell; for Managers, Messrs Joseph Albree, Alexander Bradley, Felix R. Brunot, A. C. Bakewell, John Harper, George B. Logan, J. B. Murdoch, M. D., J. B. Moorhead, A. E. W. Painter, and J. B. Sweitzer.

The Chairman of the meeting, with the Tellers, signed a certificate of the election.

On motion of Gen. Sweitzer, the meeting then adjourned.

THOMAS W. BAKEWELL,
Secretary.